CISE EDUCATIONAL INNOVATION PROGRAM

Integrating Research Results into Undergraduate Courses and Curricula

Program Announcement

DIRECTORATE FOR COMPUTER AND INFORMATION SCIENCE AND ENGINEERING

DIVISION OF EXPERIMENTAL AND INTEGRATIVE ACTIVITIES

DEADLINE DATE: May 14, 1999



Matrix of Program Requirements

GENERAL INFORMATION

Program Name: CISE Educational Innovation

Short Description/Synopsis of Program:

The objective of this program is to stimulate innovative educational activities at the undergraduate level in CISE disciplines by encouraging the transfer of research results into the undergraduate curriculum. The program supports the design, development, testing and dissemination of innovative approaches for increasing the effectiveness of the undergraduate learning experience by integrating research results into undergraduate courses and curricula. The research may be ongoing or completed and may be drawn from any research project, not only those funded by the National Science Foundation.

Cognizant Program Officer(s):

Dr. Harry G. Hedges, Program Director, Room 1160, Division of Experimental and Integrative Activities, telephone 703. 306.1980, e-mail: eipd@nsf.gov.

Applicable Catalog of Federal Domestic Assistance (CFDA)

No.: 47.070 — Computer and Information Science and Engineering

ELIGIBILITY

- Limitation on the categories of organizations that are eligible to submit proposals:
 - Proposals may be submitted from any U.S. college or university that currently offers baccalaureate degree programs in any discipline supported by the CISE Directorate.
- PI eligibility limitations: None
- Limitation on the number of proposals that may be submitted by an organization:

Only one proposal per institution will be accepted in any one year.

AWARD INFORMATION

Type of award anticipated: **Standard Grant**Number of awards anticipated in FY 99: **4 to 6 awards expected**

Amount of funds available: Approximately \$1.5 million will be available for this program in FY 1999

Anticipated date of awards: July 1999

PROPOSAL PREPARATION & SUBMISSION INSTRUCTIONS

Proposal Preparation Instructions

- Letter of Intent requirements: None
- Preproposal requirements: None
- Proposal preparation instructions: Standard NSF Grant Proposal Guide instructions
- Supplemental proposal preparation instructions: See Proposal Format section in this document.
- Deviations from standard (GPG) proposal preparation instructions: **None**

Budgetary Information

- Cost sharing/matching requirements:
 Cost sharing of at least one-half of the amount funded by NSF is required. The cost-sharing may be from any private or non-Federal source and may be cash, or any eligible budget item
- Indirect cost (F&A) limitations: **None**
- Other budgetary limitations: None

FastLane Requirements

- FastLane proposal preparation requirements: FastLane use required.
- FastLane point of contact: Helen Walston,
 Sr. Program Assistant, telephone:703. 306.1981
 e-mail: hwalston@nsf.gov
- Deadline/Target Dates
- Full Proposal Deadline 5:00 PM, May 14,1999

PROPOSAL REVIEW INFORMATION

Merit Review Criteria: Standard National Science Board approved criteria, with additional criteria specific to the program.

AWARD ADMINISTRATION INFORMATION

- Grant Award Conditions
- Special grant conditions anticipated: None anticipated
- Special reporting requirements anticipated: None

CISE EDUCATIONAL INNOVATION PROGRAM

INTRODUCTION

The objective of the CISE Educational Innovation (EI) program is to stimulate innovative educational activities at the undergraduate level in CISE disciplines by encouraging the transfer of research results into the undergraduate curriculum.

PROGRAM DESCRIPTION

The EI program will support the design, development, testing and dissemination of innovative approaches for increasing the effectiveness of the undergraduate learning experience in CISE disciplines (see NSF Guide to Programs, NSF 99-4) by integrating research results into undergraduate courses and curricula. The research, whether on-going or completed, may be drawn from any research project, not just those funded by the National Science Foundation.

As a minimum, the set of individuals involved in a project should be chosen to ensure an appropriate level of expertise in teaching, curriculum development, and in the relevant research areas. Addition of individuals with expertise in learning sciences, education, information technologies, cognitive sciences and/or related areas, if appropriate to the project, is encouraged. It is not required that the principal investigator or other active participants in the project be the originators of the research results which are to be transferred to the undergraduate curriculum. However, the proposal should describe the group's expertise in the research area(s).

Projects supported by the EI program are expected to act as a national model of excellence by being a prototype of educational experiences for use by a broader segment of the scientific and engineering community. Consequently, successful dissemination of the project results is essential. The proposal should contain a detailed set of activities for communicating the results of the project to the CISE community. Collaboration with other institutions, particularly as part of the dissemination activities, is highly encouraged. The formality, level, and nature of this collaboration will be the decision of the institutions concerned; however the effectiveness of the dissemination activities will be part of the evaluation criteria. An institution submitting a proposal should also include a budget amount for at least one trip by the principal investigator to a major educational conference for presentation of results of the project.

EI awards will have a duration of three years and are expected to range from \$300,000 to \$600,000 over the three year period. At the current level of funding for this program, we expect 4-6 proposals to be selected for support each year.

FULL PARTICIPATION OF UNDERREPRESENTED GROUPS

The Foundation encourages proposals to increase the participation of women, minorities*, and persons with disabilities (hereinafter referred to as underrepresented groups). The level, nature and appropriateness of participation by underrepresented groups will be an important part of the evaluation.

ELIGIBLE PROJECT COSTS

The EI program provides support for a variety of educational activities including but not limited to the development of courses, instructional technologies, software, and other educational materials. The budget request may include a modest amount of equipment/instrumentation for faculty, staff, or students to work on the experimentation, design or development of project materials. However, the program will not directly supply funds for the purchase of equipment/instrumentation to equip laboratories intended for general student use.

ELIGIBILITY

Proposals will be accepted from any U.S. college or university that currently offers baccalaureate degree programs in any discipline supported by the CISE Directorate. Only one proposal per institution will be accepted in any one year.

PROPOSAL PREPARATION & SUBMISSION INSTRUCTIONS

A. PROPOSAL PREPARATION INSTRUCTIONS

Proposals submitted in response to this program should be prepared and submitted in accordance with the general guidelines contained in the *Grant Proposal Guide* (GPG) (NSF 99-2). The complete text of the GPG (including electronic forms) is available electronically on the NSF Web site at: http://www.nsf.gov/. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone 301.947.2722 or by e-mail from pubs@nsf.gov.

Proposers are reminded to identify the program announcement number (nsf99-?) in the program announcements/solicitation

^{*}American Indian or Alaskan Native, African-American, Hispanic, or Pacific Islander

block on the NSF Form 1207, "Cover Sheet for Proposal to the National Science Foundation." Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

PROPOSAL FORMAT

The following parts of the proposal should be submitted as directed in the FastLane instructions.

- I. Cover Page. The standard NSF cover page, NSF Form 1207 (NSF 99-2) must be used and it will be the first page of the proposal. A printed copy of the cover page and certification page must be signed by the Principal Investigator(s) and the Authorized Organizational Representative and mailed to the NSF.
- II. A Project Summary, not more than one page in length.
- **III.** Table of Contents with page numbers keyed to major sections of the proposal.
- **IV.** Project Description (Fifteen page limit, including results from prior NSF support, which is limited to five pages (See Chapter II.D.4 of NSF 99-2).

The structure of this section is left up to the proposing institution. It should present its case in the best possible light bearing in mind the criteria to be used by reviewers in judging the merits of the proposal. The following specific items should be addressed:

- 1. A description of the educational activities to be undertaken indicating the expected results and the expected national impact of the proposed activities.
- 2. A detailed plan for transferring project results to other institutions and the CISE community.
- 3. A description of activities designed to increase participation in the project activities of underrepresented groups, where appropriate.
- 4. A description of the duties and responsibilities of the principal investigator and all other associated personnel.
- 5. A description of the project management plan and the evaluation plan to assess the impact of the proposed educational programs.
- 6. A description of the equipment, software, and other facilities and materials currently available to support the academic programs of the department.

- 7. A description of the equipment, software, and other items requested for each year with itemized and total cost, and a rationale for its selection. For equipment, include a representative manufacturer and model number, if possible. Describe maintenance costs per year and method of computation.
- V. References Cited (See Chapter II.D.5. of NSF 99-2)

VI. Biographical Sketches

In no more than two pages each, include the current curriculum vitae and a brief summary of the research and educational accomplishments over the past five years, for each faculty member who will be directly involved in the project.

VII. Budget

- 1. Using four appropriately labelled copies of NSF Form 1030 (NSF 99-2), one for each year of the grant and one cumulative total for three years, give the requested NSF budget.
- 2. On a separate page, using budget items similar to those on NSF Form 1030, list for each item a) Funds Needed for the Item, b) Funds Cost-Shared by Institution, and c) NSF Funds Requested (one-page limit).

VIII. Current and Pending Support

Supply the information indicated in NSF Form 1239 (NSF 99-2), i.e. all current and pending research and educational project support for each investigator listed in 1 above.

B. BUDGETARY INFORMATION

COST-SHARING REQUIREMENTS

Institutions should be prepared to make a substantial commitment to the project of at least one half of the amount funded by NSF. If the institution(s) can justify the acquisition of equipment/instrumentation to equip laboratories for the primary use of undergraduates enrolled in courses to be developed or modified in the proposed project as crucial to the success of the project, then some or all of such expenditures may be eligible items for cost-sharing contribution. The proposed cost sharing must be shown on line M on the proposal budget (NSF Form 1030).

The amount of cost sharing must be shown in the proposal in enough detail to allow NSF to determine its impact on the proposed project. Documentation of availability of cost sharing must be included in the proposal.

Only items which would be allowable under the applicable cost principles, if charged to the project, may be included as the grantee's contribution to cost sharing. Contributions may be made from any non-Federal source, including non-Federal grants or contracts, and may be cash or in-kind (see OMB Circular A-110, Section 23). It should be noted that contributions counted as cost-sharing toward projects of another Federal agency may not be counted towards meeting the specific cost-sharing requirements of the NSF grant.

All cost-sharing amounts are subject to audit. Failure to provide the level of cost-sharing reflected in the approved grant budget may result in termination of the NSF grant, disallowance of grant costs and/or refund of grant funds to NSF.

C. PROPOSAL DUE DATE

The deadline for EI grant proposals is May 14, 1999. Proposals under this program announcement **MUST** be submitted by the NSF FastLane system, as described below. Proposals received after the deadline date will be returned unprocessed. Awards are to be made in the summer of each competition year.

D. FASTLANE REQUIREMENTS

CISE Educational Innovation proposals are required to be submitted electronically using the NSF FastLane system for electronic proposal submission. The NSF Fastlane system is available for electronic preparation and submission of a proposal through the Web at the Fastlane Web site at http://www.fastlane.nsf.gov. The Sponsored Research Office (SRO or equivalent) must provide a Fastlane Personal Identification Number (PIN) to each Principal Investigator (PI) to gain access to the Fastlane "Proposal Preparation" application. PIs that have not submitted a proposal to NSF in the past must contact their SRO to be added to the NSF PI database. This should be done as soon as the decision to prepare a proposal is made.

In order to use NSF FastLane to prepare and submit a proposal, the following software is required:

Browser: (must support multiple buttons and file upload)

- Netscape 3.0 or above
- Microsoft Internet Explorer 4.0 or above

PDF Reader (needed to view/print forms)

• Adobe Reader 3.0 or greater

PDF Generator (needed to create project description)

- Adobe Acrobat 3.01 or above
- Aladdin Ghostscript 5.10 or above

A list of registered institutions and the Fastlane registration form are located on the Fastlane Web page.

For paper submission of proposals, the delivery address must clearly identify the NSF announcement or solicitation number under which the proposal is being submitted.

Proposals must be submitted via FastLane no later than 5:00 PM (submitter's local time) on May 14, 1999 and the signed (paper) cover sheet must be mailed in time to arrive at the following address within five working days of the deadline:

CISE Educational Innovation Program NSF, Room 1160 4201 Wilson Boulevard Arlington. VA 22230

For questions or problems concerning submitting a proposal via FastLane, please send an email message to fastlane@nsf.gov or call 703-306-1142.

PROPOSAL REVIEW INFORMATION

A. Merit Review Criteria.

Review of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program officers charged with the oversight of the review process. NSF invites the proposer to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Special care is taken to ensure that reviewers have no immediate and obvious conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority serving institutions, adjacent disciplines to that principally addressed in the proposal, etc.

Proposals will be reviewed against the following general merit review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

In addition, specific criteria to be used to evaluate the proposals in this program will include the following items:

- Potential of the project to act as a national model of excellence for the CISE community.
- Overall merit of the proposed educational activities.
- Overall merit of the research results to be transferred to the instructional domain.
- Plan for dissemination of project results.
- Qualifications of the proposed Principal Investigator, the faculty, and other project personnel.
- Level, nature, and appropriateness of participation by underrepresented groups.
- Plan for management and operation of the project.
- Plan for evaluation of the project and its impact.
- Institutional cost-sharing and related support for the project.

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learner perspectives. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

Integrating Diversity into NSF Program, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens — women and men, underrepresented minorities, and persons with disabilities — are essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

B. Merit Review Process and Associated Customer Service Standard.

Most of the proposals submitted to NSF are reviewed by mail review, panel review, or some combination of mail and panel review. Proposals submitted in response to this announcement will be reviewed primarily by panel and, if necessary, mail review.

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Reviewers will be asked to formulate a recommendation to either support or decline each proposal. A program officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation. In most cases, proposers will be contacted by the program officer after his or her recommendation to award or decline funding has been approved by his or her supervisor, the division director. This informal notification is not a guarantee of an eventual award. NSF will be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 95 percent of proposals in this category. In those cases where a proposal is being considered for joint funding by separate divisions, directorates, or agencies, NSF will be able to notify applicants within nine months in 95 percent of proposals. The time interval begins on the proposal deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. The interval ends when the division director accepts the program officer's recommendation.

In all cases, after final programmatic approval has been obtained, the recommendation then goes to the Division of Grants and Agreements for review of business, financial and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with an NSF program officer. A principal investigator or organization that makes

financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants Officer does so at its own risk.

AWARD ADMINISTRATION INFORMATION

A. Notification of the Award.

Notification of the award is made *to the submitting organiza*tion by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program or Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator.

B. Grant Award Conditions.

An NSF grant consists of: (1) the award letter, which includes any special provisions applicable to the grant and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable grant conditions, such as Grant General Conditions (NSF GC-1)* or Federal Demonstration Partnership Phase III (FDP) Terms and Conditions* and (5) any NSF brochure, program guide, announcement or other NSF issuance that may be incorporated by reference in the award letter. Electronic mail notification is the preferred way to transmit NSF grants to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

* These documents may be accessed electronically on NSF's Web site at: http://www.nsf.gov/. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone 301.947.2722 or by e-mail from pubs@nsf.gov.

Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, (NSF 95-26) available electronically on the NSF Web site. The GPM also is available in paper copy by subscription from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. The GPM may be ordered through the GPO Web site at: http://www.gpo.gov>.

C. Reporting Requirements.

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after expiration of a grant, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented a new electronic project reporting system, available through FastLane, which permits electronic submission and updating of project reports, including information on: project participants (individual and organizational); activities and findings; publications; and, other specific products and contributions. Reports will continue to be required annually and after the expiration of the grant, but PIs will not need to re-enter information previously provided, either with the proposal or in earlier updates using the electronic system.

Effective October 1, 1998, PIs are required to use the new reporting format for annual and final project reports. PIs are strongly encouraged to submit reports electronically via FastLane. For those PIs who cannot access FastLane, paper copies of the new report formats may be obtained from the NSF Clearinghouse as specified above. NSF expects to require electronic submission of all annual and final project reports via FastLane beginning in October, 1999.

D. New Awardee Information.

If the submitting organization has never received an NSF award, it is recommended that the organization's appropriate administrative officials become familiar with the policies and procedures in the NSF *Grant Policy Manual* which are applicable to most NSF awards. The "Prospective New Awardee Guide" (NSF 97-100) includes information on: Administration and Management Information; Accounting System Requirements and Auditing Information; and Payments to Organizations with Awards. This information will assist an organization in preparing documents that NSF requires to conduct administrative and financial reviews of an organization. The guide also serves as a means of highlighting the accountability requirements associated with Federal awards. This document is available electronically on NSF's Web site at: http://www.nsf.gov/cgi-bin/getpub?nsf97100>.

CONTACT FOR ADDITIONAL INFORMATION

If you would like additional information relating to this program, please contact the Program Director for the Educational Innovation Program at :

Program Director
CISE Educational Innovation Program
Division of Experimental and Integrative Activities,
Room 1160
National Science Foundation
Arlington, VA 22230
Electronic mail address: eipd@nsf.gov
Telephone number: (703) 306-1980.

OTHER PROGRAMS OF INTEREST

The NSF Guide to Programs is a compilation of funding opportunities for research and education in science, mathematics, and engineering. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter. Beginning in fiscal year 1999, the NSF Guide to Programs only will be available electronically. Many NSF programs offer announcements concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices listed in Appendix A of the GPG.

Any changes in NSF's fiscal year programs occurring after press time for the Guide to Programs will be announced in the E-Bulletin, available electronically on the NSF Web site at: http://www.nsf.gov/. The direct URL is http://www.nsf.gov/home/ebulletin/. Subscribers can also sign up for NSF's Custom News Service to find out what funding opportunities are available.

OTHER EDUCATIONAL PROGRAMS

Other NSF educational programs complementary to the CISE Educational Innovation Program are:

The CISE Educational Supplements (NSF 90-154) program offers supplements to CISE-supported research grants to establish closer links between CISE-supported research and undergraduate education, and to assist in accelerating the transfer of research results into the classroom. The supplements are expected to range from \$4,000 to \$20,000 and should coincide in duration with the underlying research award. Additional information may be obtained from the Division of Experimental and Integrative Activities, Room 1160, NSF, Arlington, VA 22230 (703-306-1980).

The Combined Research-Curriculum Development (NSF 98-38) program addresses the need to increase the rate at which research advances in important technology areas are incorporated into the upper level undergraduate and graduate engineering and computer and information science curricula. Additional information may be obtained from the Division of Engineering Education and Centers, Room 585, NSF, Arlington, VA 22230 (703-306-1380).

The Course, Curriculum, and Laboratory Improvement (CCLI), (NSF 98-45), program applies to all NSF disciplines and emphasizes introductory-level courses, curricula, and laboratories, and encompasses all activities affecting the learning environment, content, and experience of instruction at this level. Additional information may be obtained from the Division of Undergraduate Education, Room 835, NSF, Arlington, VA 22230 (703-306-1666).

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals on behalf of all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to participate fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF (some programs may have special requirements that limit eligibility).

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the program announcement or contact the program coordinator at (703) 306-1636.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 306-0090, FIRS at 1-800-877-8339.

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to:

Reports Clearance Officer Information Dissemination Branch Division of Administrative Services National Science Foundation Arlington, VA 22230

Programs described in this publication are in Category 47.070 (Computer and Information Science and Engineering) in the Catalog of Federal Domestic Assistance.

YEAR 2000 REMINDER

In accordance with Important Notice No. 120 date June 27, 1997, Subject: Year 2000 Computer Problem, NSF awardees are reminded of their responsibility to take appropriate actions to ensure the the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include: computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF funded activity. Information concerning Year 2000 activities can be found on the NSF web site at http://www.nsf.gov/oirm/y2k/start.htm.

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 NSF 99-80

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 (Replaces NSF 98-44)

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